MVA Microsoft Virtual Academy

03 | Object-Oriented Programming

Microsoft

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Module Overview

- Fundamentals of Classes
- Introducing Encapsulation
- Introducing Inheritance
- Introducing Polymorphism

Fundamentals of Classes

- A class is like a blueprint
- Encapsulates data and behavior
- Can be reused
- Objects are created in code to represent the class
- Animal
  - Type
  - Weight
  - Color
  - Make Noise
  - Move

Introducing Encapsulation

- Data and Behavior is included in class
- Both can be hidden from user
- Creates a black box
- Behavior is exposed through interfaces
- Data members cannot be directly changed

Demo Creating a Class

Introducing Inheritance

- Data and behavior taken from another class
- Concepts of super and sub class
- Provides base functionality for similar objects
- Think of character traits inherited from a parent
- Allows for code reuse

Demo Inheritance

Introducing Polymorphism

- Behavior change
- Virtual methods and overriding

Demo Polymorphism

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